

AMENDMENTS TO THE CLAIMS

Claims 1-6. (Cancelled)

7. (Currently Amended) A method for ~~recording data transmitted to~~ storing data in a storage system, the storage system having a cache and at least one storage device, the data comprising data items transmitted to the storage system, the method comprising:

receiving data items by the cache;

inserting a marker into the cache, wherein the marker is an indication that one or more of the data items received by the cache are to be ~~recorded~~ transmitted to at least one storage device prior to performing a data processing operation; and

~~recording~~ transmitting to the at least one storage device the one or more of the data items.

8. (Currently Amended) The method of claim 7, further comprising:

flushing from the cache the one or more of the data items, prior to ~~the~~ recording of the one or more of the data items performing the data processing operation.

9. (Currently Amended) The method of claim 8, further comprising flushing the marker from the cache, prior to ~~the recording of the one or more of the data items~~ performing the data processing operation.

10. (Original) The method of claim 9, further comprising flushing the one or more of the data items prior to the flushing of the marker.

11. (Original) The method of claim 7, wherein the one or more of the data items are received by the cache prior to the insertion of the marker into the cache.
12. (Original) The method of claim 7, wherein the cache comprises non-volatile memory.
13. (Original) The method of claim 7, wherein the cache comprises volatile memory.
14. (Original) The method of claim 7, wherein the data is transmitted to the storage system over a network.
15. (Currently Amended) The method of claim ~~8~~ 14, wherein the cache receives data items and flushes data items on a first-in-first-out basis.
16. (Original) The method of claim 14, wherein the network is a WAN.
17. (Original) The method of claim 14, wherein the network is a LAN.
18. (Original) The method of claim 14, wherein the network is a Fibre-Channel-based SAN.

19. (Original) The method of claim 14, wherein the network is an internet.
20. (Original) The method of claim 14, wherein the network is an intranet.
21. (Original) The method of claim 7, wherein the at least one storage device is a block-level storage device.

Claims 22-53. (Cancelled)

54. (Currently Amended) A system for ~~recording data transmitted to~~ storing data in a storage system, the data comprising data items transmitted to the storage system, wherein the storage system comprises:
- a cache ~~for~~ configured to:
 - receiving data items;
 - at least one storage device configured to:
 - store data items; and
 - a controller ~~for~~ configured to:
 - inserting a marker into the cache, wherein the marker is an indication that one or more of the data items received by the cache are to be ~~recorded~~ transmitted to the at least one storage device prior to performing a data processing operation; and ~~for~~
 - ~~recording~~ cause the one or more of the data items to be transmitted to the at least one storage device.

55. (Currently Amended) The system of claim 54, wherein the ~~cache~~ controller is further configured to:

~~flushes cause the one or more of the data items prior to the recording of the one or more of the data items~~ to be flushed from the cache prior to performing the data processing operation.

56. (Currently Amended) The system of claim 55, wherein the ~~cache~~ controller is further configured to:

~~flushes cause the marker to be flushed from the cache prior to the recording of the one or more of the data items~~ performing the data processing operation.

57. (Currently Amended) The system of claim 56, wherein the ~~cache~~ controller is configured to:

~~flushes cause the one or more of the data items~~ to be flushed from the cache prior to the flushing of causing the marker to be flushed.

58. (Currently Amended) The system of claim 54, wherein the cache is configured to:

~~receives~~ receive the one or more of the data items prior to the insertion of the marker into the cache.

59. (Original) The system of claim 54, wherein the cache comprises non-volatile memory.

60. (Original) The system of claim 54, wherein the cache comprises volatile memory.

61. (Original) The system of claim 54, wherein the data is transmitted to the storage system over a network.

62. (Currently Amended) The system of claim 61, wherein the cache is configured to:
~~receives~~ receive data items and flushes data items on a first-in-first-out basis.

63. (Original) The system of claim 61, wherein the network is a WAN.

64. (Original) The system of claim 61, wherein the network is a LAN.

65. (Original) The system of claim 61, wherein the network is a Fibre-Channel-based SAN.

66. (Original) The system of claim 61, wherein the network is an internet.

67. (Original) The system of claim 61, wherein the network is an intranet.

68. (Currently Amended) The system of claim 54, wherein the at least one storage device is comprises a block-level storage device.

Claims 69-94. (Cancelled).

95. (New) The method of claim 7, further comprising:
performing the data processing operation.

96. (New) The method of claim 7, wherein the data processing operation comprises performing a snapshot of data stored in the storage system.

97. (New) The method of claim 7, further comprising:
transmitting the one or more of the data items to the at least one storage device.

98. (New) The system of claim 54, wherein the controller is further configured to:
perform the data processing operation.

99. (New) The system of claim 54, wherein the data processing operation comprises performing a snapshot of data stored in the storage system.

100. (New) The system of claim 54, wherein the controller is further configured to:
transmit the one or more of the data items to the at least one storage device.

101. (New) A method for storing data in a storage system, the storage system having a cache and at least one storage device, the data comprising data items transmitted to the storage system, the method comprising:

receiving data items by the cache;

inserting a marker into the cache, wherein the marker is an indication that one or more of the data items received by the cache are to be flushed from the cache prior to performing a data processing operation; and

flushing from the cache the one or more of the data items.

102. (New) The method of claim 101, further comprising:

flushing the marker from the cache; and

performing the data processing operation when it is determined that the marker has been flushed from the cache.

103. (New) The method of claim 102, wherein performing the data processing operation comprises performing a snapshot of data stored in the storage system.

104. (New) A system for storing data in a storage system, the data comprising data items transmitted to the storage system, wherein the storage system comprises:

a cache configured to:

receive data items; and

a controller configured to:

insert a marker into the cache, wherein the marker is an indication that one or more of the data items received by the cache are to be flushed from the cache prior to performing a data processing operation; and

cause the one or more of the data items to be flushed from the cache.

105. (New) The system of claim 104, wherein the controller is further configured to:

flush the marker from the cache; and

perform the data processing operation when it is determined that the marker has been flushed from the cache.

106. (New) The system of claim 106, wherein the controller is configured to:

perform a snapshot of data stored in the storage system when it is determined that the marker has been flushed from the cache.